



# **Business Intelligence Center IT Consulting Resources**

*Request for Information*

*June 28, 2013*

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### I. Business Intelligence Center Program Overview

Colorado government agencies possess large volumes of business and economic public data. This data can help businesses with strategic planning, but it exists in so many different places and formats that most businesses cannot use it. The Secretary of State's office will address this problem through the creation of the Business Intelligence Center (BIC). The BIC seeks to aggregate and analyze data and make it available to the widest audience in the most useful format.

#### A. Background

The Secretary of State's office interacts with hundreds of thousands of business entities, charities, and nonprofits in the state. The Secretary of State's office collects, manages, and disseminates large amounts of basic data about those organizations and wanted to make the data useful to Colorado businesses.

The Department sought to make this data more useful and collaborated with the Leeds School of Business at the University of Colorado to publish the [Quarterly Business and Economic Indicator Report](#). This report combines Department data with other economic data collected by the Leeds School to provide meaningful economic information to the business community. For instance, new business filings are a leading indicator of job creation. With this and other information provided in the report, the business community can make smarter decisions that will grow the Colorado economy.

Since first publishing the report in 2012, the Secretary of State received comments from many members of the business community asking to see more detailed data regarding economic trends in order to better understand the distribution of commerce in Colorado. This includes access to the location, size, vibrancy, and concentration of key business nodes. While this level of detail would be

tremendously helpful, the Department cannot provide the information because multiple state agencies collect the desired data and it is not readily available in a common place or even a common format.

A central data collection point is needed. During meetings with other government agencies, Department staff concluded that these data requests could be met by aggregating all the information spread throughout various agencies and databases into a single tool by breaking down agency silos and better cataloging existing resources. Department staff also concluded that access and availability to the data is not enough. In order to make the raw data useful to the vast majority of business owners, data analysis and visualization tools are needed. These conclusions led to the Business Intelligence Center project.

**B. The Business Intelligence Center will consist of a centralized data catalog that combines public data into a meaningful tool for businesses.**

The vision for this project is two-fold. First, it consolidates public data relevant to businesses on a single platform. Second, it gives business the tools to make the data useful. The second goal is achieved through a civic apps challenge—the Colorado Business Innovation Challenge—that will give financial incentives to the technology community to build web and mobile applications that use state and other data to solve existing business challenges.

The data platform is akin to an information clearing house. It will make data sources currently dispersed over multiple government departments and agencies accessible in a common location. This platform will offer Colorado businesses unprecedented access to public data that is validated and relevant to short and long-term needs.

Besides enhancing businesses' access to state data, the BIC will also contribute to economic growth. The creation of the BIC will make data available to all Colorado businesses at no additional cost. Currently only large entities with the time, staff, and budget to engage in detailed statistical analysis can use these data sets. Providing this data to every type and size business in Colorado provides a unique opportunity to contribute to economic development. The BIC will nurture key industry networks and lay the foundation for a digital infrastructure that will continue to expand and improve over time.

**C. The Colorado Business Innovation Challenge is an innovative way to create solutions and ensure the BIC is useful to Colorado businesses.**

Simply making the data available is insufficient to most business owners. To truly help the vast majority of businesses—especially small businesses—tools must be developed to present the data in a useful and consumable form. Normally government agencies develop tools to fill this information vacuum, but historically the government has not been successful developing highly useful and effective tools. A new approach is needed—that approach is the Colorado Business Innovation Challenge.

Modeled after a “civ apps” challenge that has been run in multiple cities across the United States and internationally, the Challenge presents the software development community with problem questions and then asks that community to create possible solutions. At the end of the challenge, the Secretary of State will license the most innovative and implementable web or mobile application.

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The best design will receive a contract with the Secretary of State to make the application available to the public on the Business Intelligence Center platform. The Department will also pursue partnerships with the Colorado technology and startup industry to provide additional incentives, such as mentoring, hosting, and office space to the Challenge winners.

The long-term intent of the program is to not only create an environment for fostering community involvement through the Challenge, but to develop sustainable tools that are developed in the Challenge.

### **D. Authorization**

The Colorado General Assembly authorized the Colorado Department of State to establish and run the Business Intelligence Center program and the Colorado Business Innovation Challenge. The Department has been appropriated funds over the next two years to establish the program. We will hire contract resources to publicize and manage the Challenge and IT consulting resources to manage the data acquisition and validation for the data catalog.

### **E. Purpose of This Request for Information**

The Department is soliciting feedback to help us better define the IT consulting needs related to the Business Intelligence Center platform and data catalog. Generally, the IT consulting services will assist with the publication of public sector data to the Colorado Information Marketplace, the State of Colorado's current data catalog, and to support developers who participate in the Challenge.

## **II. Identified Information Technology Consulting Needs**

We have identified several key areas of experience and knowledge to properly support activities under this program. The potential areas we have identified for IT consulting support are:

### **A. Critical experience or knowledge**

- Assist in identification and education of data stewards – The consultant will assist the BIC program manager and State of Colorado's Chief Data Officer to identify promising and useful datasets and help to educate data stewards in understanding why the data should be released and published.
- Knowledge of open data platforms – The consultants will need experience and knowledge of data platforms because the consultant will assist with the management and maintenance of the data catalog component of the Business Intelligence Center. The Colorado Information Marketplace, the State's current data catalog, runs on the Socrata data platform. The current plan is to utilize the Colorado Information Marketplace for the data needs of the Business Intelligence Center program. At the same time, the program will likely interact and gain partnerships with local governments which share data. A large number of Colorado municipalities have data catalogs supported by the OpenColorado data platform that runs on the CKAN data platform. Therefore, the IT consultants will need to be familiar or have knowledge of these platforms because the program will enact with entities using both platforms.

- Data architecture – Data policies, governance, accessibility, and data structures will vary from agency to agency. The consultants will need knowledge and experience in data architecture and specifically data modeling, validation, and governance work.
- Understanding of data APIs and their structures – Ideally, the program will provide data APIs to the Challenge participants. The consultant will assist with the implementation of data APIs and will advise the program manager on the feasibility of implementing data APIs or other methods of publishing data.
- Programming languages – The following programming languages will likely be utilized or are used with the Socrata and CKAN data platforms: Python, PHP, JSON, SQL
- Scripting experience – The program will likely require scripting knowledge and experience to automate data uploads and other service to improve the processes.

## **B. Preferred experience or knowledge**

- Understanding of open records and data laws and policies – Much of the data utilized by the program is likely to be government data and will therefore be subject to the Colorado Open Records Act and other data-sharing laws and policies. Therefore, knowledge and experience with the laws and policies that govern public sector data will be substantially helpful to the program.
- Experience with open data catalog frameworks
  - As stated above, the State data platform runs on the Socrata data platform. Therefore, any work with Socrata data catalog platform will be beneficial to the program.
  - Many local governments use the CKAN data platform, so any work with the CKAN data catalog and synchronization with Socrata will benefit the program.
- Experience creating data-related APIs – As stated above, the program will likely implement APIs and other Web-services. Therefore, experience creating API's and other Web-services will increase the likelihood of success.
- Code analysis – At the end of the Challenge, finalists will submit mobile and Web applications. These applications will be eligible to win a contract with the Department of State as part of the Challenge award. Therefore, the Department must have reasonable certainty that the applications will function as promised. To create this certainty, the Department will likely need assistance with code analysis.
- Developed Web applications, mobile applications, or both – The Challenge component of the program will generate mobile and Web applications. The program would benefit from consultants experienced in development of mobile and Web applications to inform what data will be most helpful and to assist the Challenge judges assess the applications.
- Software integration experience – The Challenge winners will be awarded a contract with the Department of State and the Department contemplates that application will be integrated in some fashion into the Business Intelligence Center platform. Any experience in these areas will be useful and will greatly improve the programs likely success.
- Some knowledge of information security best practices – Although the majority of the data and information the program will use is public data, there may be situations where knowledge of information security practices is helpful.

### **III. General Questions**

As we launch the Business Intelligence Center program, we'd like to proceed with the benefit of information from interested and experienced parties regarding open data programs, civic-based challenges and hackathons, and data acquisition activity. Please consider the following questions and respond as appropriate:

1. In Section II above, we have identified several key experience and knowledge areas that we will include in our Request for Proposals (RFP) for IT consulting to support for the BIC program. What knowledge, skill, and abilities (KSA) should also be considered as we move ahead with that RFP?
2. What KSA are more critical than others? And are any of the preferred KSA's actually required and not merely preferred?
3. Based on other open data initiatives, what key technical skills sets and resources are most critical to success?
4. Based on other open data initiatives, what key management skills sets and resources are critical to success?
5. The State of Colorado currently has a year remaining on a contract with Socrata to provide the State data catalog. As the State considers renewal of the contract, what factors are most important in guiding the decision-making? What alternative(s) should be evaluated? Why?
6. As we are seeking resources to consult and create APIs for the program, should we consider asking for API development resources at a fixed price for API work or is a "time and materials" approach more suitable?
7. Do you have knowledge or experience about open data initiatives and the types and costs for IT consulting resources for those efforts?

### **IV. Response Format**

Responses to this RFI should be submitted to the Department of State (DOS) no later than 3:00 p.m., MDT, on Monday, July 15, 2013. Responses received after the deadline will not be considered. Respondents are responsible for all expenses associated with responding to this request. The DOS will not pay for any information or ideas submitted in response to this request or for any costs incurred by any party as a result.

Responses should be delivered by email to:

Brian Gryth, [brian.gryth@sos.state.co.us](mailto:brian.gryth@sos.state.co.us)

**Business Intelligence Center**  
**IT Consulting Resources**

Responses should be limited to a maximum of ten pages. Questions regarding this request should be submitted to Mr. Gryth via email only.